

## The Orbit Memory

### To Use:

1. Turn power on.
2. Put DATA IN down.
3. Hold WRITE in.
4. Push START and then release it.
5. Hold SCAN in.
6. Wait for RUN light to go out.
7. Release SCAN and WRITE.

The memory is now cleared.

8. Consult the Hopkins Az-El book.
9. Locate the page for the expected S/N equatorial crossing.
10. Follow the directions on that page.

### Theory of Operation:

The Orbit Memory permits the storage of 512 commands, each command consisting of two bits in succession. The four commands are -

- 00 no operation
- 01 pulse azimuth for 1 second (6 degrees)
- 10 pulse elevation for 1 second (6 degrees)
- 11 change elevation direction

One command (2 bits) is read sequentially every 3 seconds. This permits storage of azimuth/elevation parameters for 25 minutes.

When the unit is in the RUN mode, the address switches are ignored. When stopped, the address switches allow memory locations to be read via the DATA OUT light, and written with the WRITE pushbutton and the DATA IN toggle switch (up is 1 and down is 0). SCAN speeds up the internal clock about two hundred times.

The elevation direction is under program control, and is initialized to ASCENDING. The azimuth direction is not under program control, and can be set to either clockwise or counter-clockwise from the front panel.

The Orbit Memory is a pre-microprocessor design, consisting of one 2102 random access memory and TTL logic. If I ever locate the schematic, I will place a copy in the shack.

de N3IC (1979)

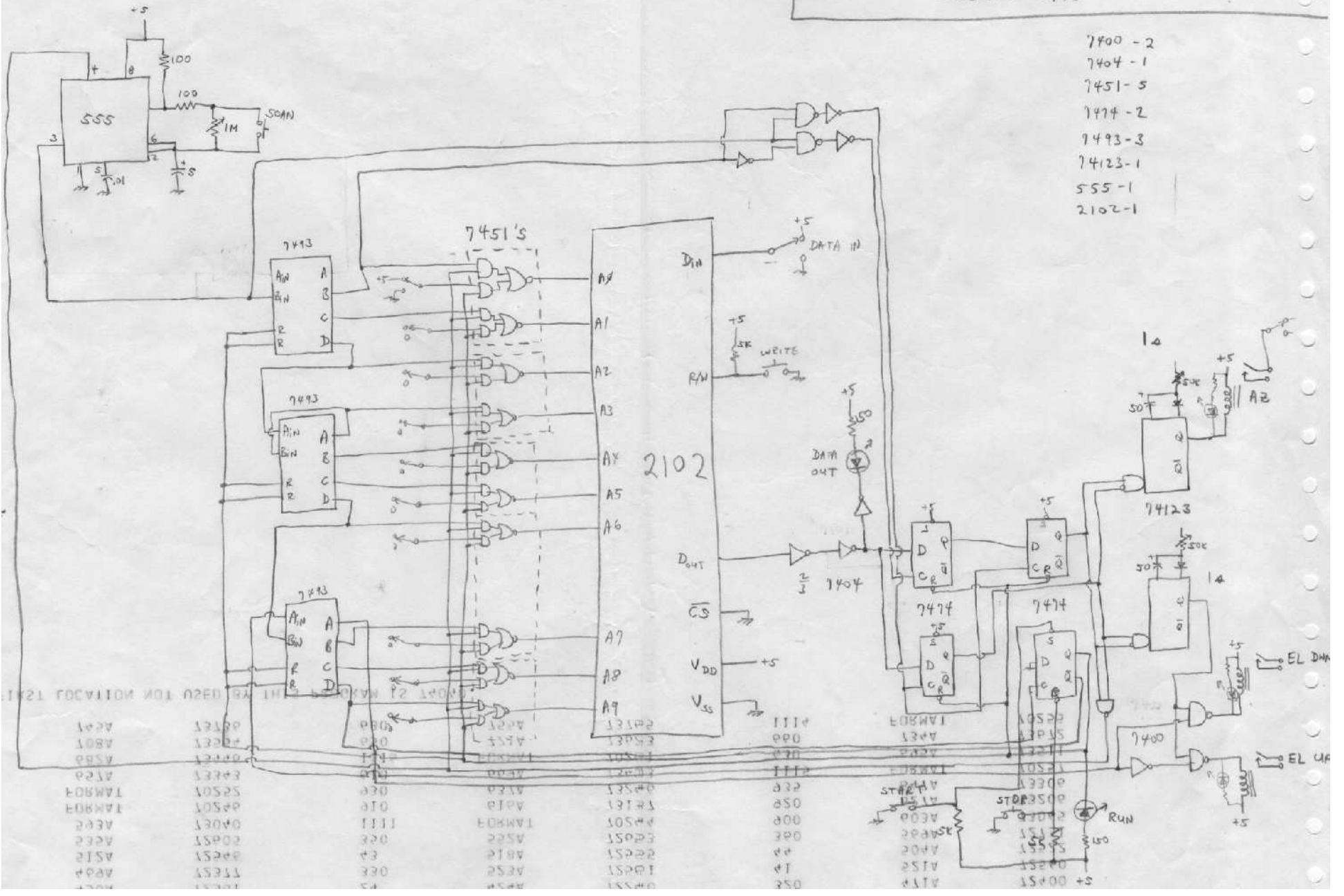
unit constructed by WA3MSW in 1975

1.5 a

# DIGITAL CONTROLLER FOR SATELLITE TRACKING

WASMSW 5/75

- 7400 - 2
- 7404 - 1
- 7451 - 5
- 7474 - 2
- 7493 - 3
- 74123 - 1
- 555 - 1
- 2102 - 1



RAM ADDRESS DATA

000	000
001	001
002	002
003	003
004	004
005	005
006	006
007	007
008	008
009	009
010	010
011	011
012	012
013	013
014	014
015	015

